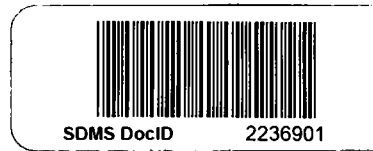




ORIGINAL



May 6, 2014

Mr. Harry R. Steinmetz (3HS62)  
US Environmental Protection Agency  
1650 Arch Street  
Philadelphia, PA 19103

Reference: Request for Information dated February 25, 2014

Dear Mr. Steinmetz,

We enclose our response to the EPA's Request for Information dated February 25, 2014. Under a separate cover letter, we will send Attachment 1 which is being provided as Confidential Business Information.

Please contact me with any questions.

Regards,

A handwritten signature in cursive script, appearing to read 'Bill'.

William E. Lynch Jr.  
President

Encl.

Cc: Mr. Carl Everett, Saul Ewing

RESPONSE TO EPA REQUEST FOR INFORMATION OF FEBRUARY 25, 2014

1. I have never been employed by or associated with any of Safety Light Corporation's predecessor companies. In addition, I have never been employed by or associated with US Radium Corporation, Lime Ridge Industries, USR Industries, Inc., USR Metals, Inc., US Natural Resources, Inc., USR Chemical Products, Inc., USR Lighting Products, Inc., or UNATCO Funding Corporation.

I have been employed by Isolite Corporation since April 1996. In addition to my responsibilities at Isolite, since my date of employment, I was / am responsible for the oversight of Safety Light Corporation, Shield Source Incorporated, and Litebar Technology. Metreal Corporation is a wholly owned subsidiary of Safety Light Corporation and as such my association with it also began in 1996.

I became the President of Evenlite, Inc. when it was acquired in 2000 and the President of Self-Powered Lighting when it was acquired in 2002.

a) None.

2. Isolite Corporation:

- a) I was hired as Vice President in April 1996 and assumed the title of President in 1999. I remain employed there today.
- b) Initially hired by owner, CR White, to oversee company's sales and marketing efforts as well as oversee and manage the relationship with other companies he owned, namely, Safety Light Corporation and Shield Source Incorporated. When I assumed the title of President in 1999, my responsibilities expanded to help develop the strategic direction for the company and oversee its implementation.
- c) I reported to CR White, the CEO and owner, until his death in March 2010 at which time I purchased the company.
- d) My direct reports have always included the Chief Financial Officer/Controller and our Regional Sales Managers. These positions have been held by various different individuals during my tenure and include:
  - Kathy Fishel – Controller since 1996
  - Ed Silverthorn – CFO since 2004
  - Dick Smith – Eastern Regional Sales Manager through August 1996
  - Rick Renzi – Eastern Regional Sales Manager since September 1996
  - San White – Western Regional Sales Manager through March 2011
  - Erik Smith – Western Regional Sales Manager since June 2000
  - Don McLaughlin – Mid-West Regional Sales Manager through July 1997
  - Dana Garbutt – Sales Services Manager – April through December 1997
  - Bill Rowan - Sales Services Manager – March 1998 through January 2001
  - Alex Barth - Sales Services Manager – February 2001 through June 2001

Nikki Springer - Sales Services Manager – July 2001 through December 2007

Taylor Perry - Sales Services Manager – January 2008 through September 2013

Christine Martin - Sales Services Manager – October 2013 to present

- e) Since my date of hire, my office has always been located at 31 Waterloo Avenue, Berwyn, PA 19312.
- f) While Safety Light Corporation was in operation, I spoke with the plant manager and other employees there on an almost daily basis and visited the Bloomsburg facility 4 to 10 times per year.

Safety Light Corporation:

- a) Although I was never employed by Safety Light Corporation or on their payroll, in my oversight role, I served as the Vice President of Safety Light beginning in 1997 and continued in that role until their closure.
- b) I was responsible for managing Safety Light's relationship with Isolite and Shield Source as well as helping to manage the relationship with the US NRC.
- c) I reported to CR White, the President and owner, until his death in March 2010 at which time I purchased the company.
- d) My direct report was Larry Harmon, the General Manager of Safety Light.
- e) My office is at Isolite 31 Waterloo Avenue, Berwyn, PA 19312
- f) In this role, I spoke with the plant manager and other employees there on an almost daily basis and visited the Bloomsburg facility 4 to 10 times per year.

Shield Source Incorporated:

- a) Although I have never been employed by Shield Source Incorporated or on their payroll, I assumed the role of President in September 1999 and remain in that role today.
- b) My responsibilities include developing the strategic direction for the company and overseeing its implementation.
- c) I reported to CR White, the President and owner, until his death in March 2010 at which time I purchased the company.
- d) My direct report is the General Manager. This position was held by:  
Ed Kettyl from my date of hire until December 2001  
Susan Tanney from January 2002 until January 2009  
Lisa McMurray from February 2009 to the present
- e) My office is at Isolite 31 Waterloo Avenue, Berwyn, PA 19312
- f) In this role, I rarely dealt with issues related to the Site.

Litebar Technology:

- a) Although I have never been employed by Litebar Technology or on their payroll, I was named President and assumed responsibility for its oversight in 1996 and continue in that role today.
- b) The company has no activities today, however, in prior years; I was responsible for its sales and marketing.

- c) I reported to CR White, the President and owner, until his death in March 2010 at which time I purchased the company.
- d) There have never been any employees and therefore there were no direct reports.
- e) My office is at Isolite 31 Waterloo Avenue, Berwyn, PA 19312
- f) There were no issues related to the Site.

Evenlite, Inc.:

- a) Although I have never been employed by Evenlite or on their payroll, I was named President and assumed responsibility for its oversight in 2000 when it was acquired by CR White. In 2001, I relinquished the title of President when I hired someone for that position and then I assumed the title of Chief Executive Officer. I remain in that role today.
- b) I was responsible for its purchase and relocation from Grasonville, Maryland to Bensalem, Pennsylvania. I oversaw all activities until a President was hired in 2001 to take these duties from me. At present, I help to develop the strategic direction for the company and aid the President in its implementation.
- c) I reported to CR White, the President and owner, until his death in March 2010 at which time I purchased the company.
- d) The President is my direct report. His name is Adrian Pavitt.
- e) My office is at Isolite 31 Waterloo Avenue, Berwyn, PA 19312
- f) There were no issues related to the Site.

Self-Powered Lighting, Inc.:

- a) Although I have never been employed by Self-Powered Lighting or on their payroll, I was named President and assumed responsibility for its oversight in 2002 when it was acquired by CR White. I remain in that position today.
- b) I was responsible for its purchase and relocation from West Nyack, New York to Berwyn, Pennsylvania. At present, I help to develop the strategic direction for the company.
- c) I reported to CR White, the President and owner, until his death in March 2010 at which time I purchased the company.
- d) The General Manager is my direct report. His name is Bill Rowan.
- e) My office is at Isolite 31 Waterloo Avenue, Berwyn, PA 19312
- f) From 2002 through 2007, there was daily communication with the Site as Safety Light manufactured all products sold by Self-Powered Lighting.

3. I have no direct knowledge of what specific items or which radionuclides were included in any items manufactured at the Site prior to my involvement in 1996. EPA employees and EPA contractors have had access to all available Safety Light records and any existing records of predecessor companies.

Since 1996, the only products fully manufactured at the Site were tritiated foils and targets. In addition, Safety Light assembled self-luminous exit and safety signs using gaseous tritium light sources which were purchased from a Canadian manufacturer, Shield Source Incorporated.

- a) During this same time period, the only radioactive isotope used in the production of Safety Light's products was tritium. The tritiated foils and targets contained a maximum of 10 curies each, but most contained less than 5 curies. The assembled self-luminous exit and safety signs could contain a maximum of 22 curies each, but usually contained 7.5 or 11.5 curies which made signs with an effective life of 10 years or 20 years respectively.
  - b) Both product categories were produced at the Site from 1996 until the time of the plant closing. Records are no longer available to provide specific quantities manufactured per year.
  - c) Both product categories were returned to the Site for their ultimate disposal elsewhere. None were returned for repair.
4. The time period for which I have knowledge is 1996 thru 2007. Safety Light accepted the return of self-luminous signs and tritiated foils and targets to the Site at their end of life to ensure their proper handling and disposal.
5. My response is limited to the time period 1996 thru 2007.
- a) Returned product, identified by a pre-assigned Return Merchandise Authorization (RMA) number, would arrive at the Site's shipping dock at the rear of the main building. Upon arrival, the boxes were inspected and checked for contamination by cutting a small slit into the box and inserting a portable tritium monitor. If no contamination was detected, as was usually the case, the box was taken to the tritium building where it was stored in the sign dismantling room until such time as the signs were removed from their shipping boxes and dismantled. Returned foils and targets were taken to the gas fill room in the tritium building to be checked before being moved to the Solid Waste Building for temporary storage.

Sign dismantling took place under a hood that was exhausted through our monitored stack. The gaseous tritium light sources (GTLS) were removed from the signs, wrapped in foam, and packaged in specially designed shipping containers for their return shipment to Safety Light's GTLS supplier. The plastic and aluminum frame components were re-used or recycled depending on their condition.

If any initial contamination was detected upon receipt, these shipping boxes were immediately taken to the tritium building and placed under a hood that was exhausted through our monitored stack. These boxes were opened under the hood and allowed to off gas before they were ultimately dismantled under this same hood. Broken or contaminated tubes were sealed in cans for storage in the solid waste building.

No products were refurbished.

- b) This information is no longer available. All records were previously turned over to the EPA at the Safety Light Site.
- c) The return of any product to the Site required the issuance of a pre-approved RMA number to the customer. This RMA was issued to a specific customer for a specified quantity of product to be returned. The RMA number was required to be prominently displayed on the exterior of any carton containing product returned to the Site. Safety Light refused to accept delivery of any carton that did not have an RMA number clearly visible on its exterior.

Product received against a specific RMA was checked for conformance with the issued RMA. Any variances were reported to the customer to ensure proper reporting to the appropriate Regulatory Authority.

- d) Returned radioactive devices were received at the shipping dock at the rear of the main building.
- e) Commercial and Aircraft Exit and Safety Signs
  - 1. All commercial exit signs and some of the aircraft signs returned to the site were disassembled at the Site. Some portion of the aircraft signs returned were too difficult to disassemble and were therefore left in their original condition and sent along with the extracted GTLS to Safety Light's supplier.

All sign disassembly took place in the sign dismantling room in the tritium building under hoods that were exhausted through the stack monitoring system. No equipment existed to capture or control the release of the tritium gas, but all releases were monitored and measured through a stack monitoring system which measured tritium gas and tritium oxide emissions. The date of installation is unknown, but it was in operation during the time period covered by my response.

- 2. This information is no longer available.
- 3. This information is no longer available, however, I can confirm that a very small percentage of GTLS were broken during disassembly.
- 4. See answer to question 5a above.
- 5. To the best of my knowledge, any and all leaking or contaminated sources were immediately placed under the exhaust hood in the gas fill room. After a period of time to allow off gassing, the item was dismantled when possible and the remaining contaminated item was placed into an airtight container before being removed to the solid waste building. Accumulated contaminated waste was regularly sent offsite for appropriate disposal.
- 6. This information was logged by the operator and kept by the Health Physics Department. This information was previously turned over to the EPA at the Site and is no longer available to us.
- 7. I am not able to cite the federal or state regulations or requirements that were followed. The Site and SLC's operations were regularly inspected by the US NRC and the PA Department of Environmental Protection who ensured that all regulations and

requirements were followed. I am not aware of any infractions cited by the regulators in this regard.

**Tritiated Foils & Targets**

1. None were disassembled at the site.
  2. Not applicable.
  3. Not applicable.
  4. See answer to question 5a above.
  5. To the best of my knowledge, any and all leaking or contaminated sources were immediately placed under the exhaust hood in the gas fill room. After a period of time to allow off gassing, the item was dismantled when possible and the remaining contaminated item was placed into an airtight container before being removed to the solid waste building. Accumulated contaminated waste was regularly sent offsite for appropriate disposal.
  6. This information was logged by the operator and kept by the Health Physics Department. This information was previously turned over to the EPA at the Site and is no longer available from us.
  7. I am not able to cite the federal or state regulations or requirements that were followed. The Site and SLC's operations were regularly inspected by the US NRC and the PA Department of Environmental Protection who ensured that all regulations and requirements were followed. I am not aware of any infractions cited by the regulators in this regard.
- f) Returned items were received at the shipping dock of the main building; however, they never stayed there for more than 1 day. Signs for dismantling were either sent to the sign dismantling room, if they were received in a non-contaminated state, or to the hood in the gas fill room if leaking or contaminated. Signs were dismantled as quickly as possible and, when a shippable quantity of expired GTLS was accumulated, it was shipped off site to SLC's supplier. As soon as the contaminated item had been processed and packaged, it was moved to the solid waste building for storage. I believe packaged items could have remained in the solid waste building for up to three years before being shipped for appropriate disposal.
- g) During the time period covered by my response and my personal knowledge, no radioactive items were disposed of at the Site.
- h) Expired GTLS from disassembled signs were returned to SLC's supplier, Shield Source Incorporated in Peterborough, Ontario, Canada. Waste from the Solid Waste Building was sent to licensed US facilities. Further detail is no longer available.
6. My response is limited to the time period from 1996 thru 2007
- a) The production of tritiated foils and targets occurred in the gas fill room using the gas filling machine. A small quantity of foils and targets were rejected by Quality Control, sealed in containers, and sent to the solid waste building. The use of this room also generated small quantities of paper, gloves and water waste related to cleaning.

The assembly and disassembly of self-luminous commercial and aircraft signs would occasionally result in a broken GTLS which would itself become radioactive waste along with the paper products, gloves, and water that would be used in its clean-up.

Radioactive waste from manufacturing was never comingled with non-radioactive waste.

- b) Final assembly and manufacturing of all radioactive parts took place in the tritium building. Machining of metal and plastic parts took place in the machine shop. Painting was done in the paint shop in the Butler Building.
  - c) This information is no longer available and may have already been turned over to the EPA representatives at the Site.
  - d) The radioactive waste resulting from the manufacturing operations described above were stored in the Solid Waste Building until such time that they were sent off-site. None were treated or disposed of on site. Information on quantities is no longer available.
  - e) This information is no longer available. All records were previously turned over to the EPA at the Safety Light Site.
7. The time period for which I have knowledge is 1996 thru 2007. Safety Light's Health Physics Department kept a log book at the site that recorded waste in and out of the solid waste building. The only such log book that I am aware of covered the period from 1986 through 2008 and it is currently in the possession of the EPA at the Bloomsburg site.
8. The time period for which I have knowledge is 1996 thru 2007. All information provided in response to this question is provided as **Confidential Business Information** and as such is sent under separate cover. All Safety Light records have already been turned over to the EPA at the Bloomsburg site. The report, identified as Attachment 1 and sent under separate cover as **Confidential Business Information**, is generated from the Isolite computer system and provides all available information concerning the return of self-luminous exit signs from Isolite customers to the Safety Light Site.

It remains our contention that the return of these signs to the Site represented de minimis quantities that had no significant environmental effect on the Site. In defense of this position, we attach, identified as Attachment 2, a copy of the report previously submitted to the EPA by Health Physicist, Ted Rahon, during a meeting at the Region 1 Headquarters in 2007:

Signs returned to the site were dismantled as described in response to Questions 4 & 5 above. The GTLS were removed from the signs under an exhaust hood connected to the facilities emissions monitoring stack. Once removed, the GTLS were packaged and returned to the supplier. According to Mr. Rahon's report, of the 290,976 GTLS extracted from returned signs during the period from 2000 to 2007, only 136 tubes were broken resulting in an insignificant contribution to the contamination at the Site.



9. a) See Attachment 1  
b) See Attachment 1  
c) All returned devices identified in Attachment 1 are self-luminous signs containing gaseous tritium light sources. The signs were manufactured with a 10, 15, or 20 year effective life. To achieve the required luminance level, the signs contained approximately 8.5, 10.5, and 12.5 curies of tritium respectively at their time of manufacture. Returned signs would obviously contain less tritium due to tritium's 12.3 year half-life.  
d) All Safety Light's documents have already been turned over to the EPA at the Site.  
e) All disassembled and unbroken GTLS were packaged and returned to Safety Light's supplier, Shield Source Incorporated in Peterborough, Ontario, Canada. Any signs or tubes that either arrived broken or were broken during disassembly were properly packaged and stored in the Solid Waste Building at the Site before being shipped offsite to a licensed facility. The only information that I have at this time is that waste shipments were handled for Safety Light by the following companies: US Ecology, Chase Environmental, Chem Nuclear and Solutient Technologies. Any and all available documentation pertaining to any waste shipments has already been turned over to the EPA.  
f) All returned signs arrived by truck via FedEx, UPS or another common carrier. These products were never received via the US Postal Service.  
g) Larry Harmon – Safety Light, General Manager  
Cindy Litterer – Safety Light, Administrative Assistant  
Dana Garbutt – Isolite, Sales Services  
Nikki Springer – Isolite, Customer Support  
Bill Rowan – Isolite, Sales Services  
Alex Barth – Isolite, Sales Services  
Erik Smith – Isolite, Western Regional Sales Manager  
Rick Renzi – Isolite, Eastern Regional Sales Manager  
Bill Lynch – Isolite, President  
h) See Attachment 1. Customers were permitted to return self-luminous signs free of charge on a one for one basis with the purchase of a replacement sign or signs. Customers were charged \$75 per sign for any signs returned for disposal without a corresponding purchase.  
i) Beginning in 1997, Isolite began contacting customers shortly before the expiration of their sign's effective life to advise them that their sign would soon no longer be Code compliant and to advise them of their disposal obligations. A copy of the letter used today is attached, as Attachment 3, as an example of what was sent previously. Copies of old letters or other documents no longer exist. Almost all returns were a result of the expiration of the signs effective life.  
j) There are no known transshipment locations. At the Site, signs were received at the shipping dock at the rear of the main building and then carried to the Tritium Building where they were dismantled, packaged and stored until shipment to Shield Source. Broken tubes were stored in the Solid Waste Building prior to shipment off-site.  
k) Not applicable.  
l) See answers to Questions 4 & 5 above.

- m) The GTLS disassembled from returned signs were comingled and packaged together for shipment off-site.
- n) In general, the measures taken by customers to determine how and where the disposal of the signs returned varied from customer to customer. At the minimum, all wanted assurance that they were returning / disposing of their unwanted signs in a manner consistent with Federal Regulations. Some were satisfied with our verbal assurance, while others required written confirmation.

10. As stated in Safety Light Corporation's response to EPA's 104(e) request of August 2, 2005, "Safety Light has approached all insurance carriers that have provided coverage at the Bloomsburg facility and exhausted all possible avenues for financial remuneration from these policies. A comprehensive list of all the carriers and the settlements reached is attached. The monies recovered have been used for expenses related to site licensing and remediation. Copies of the policies are not readily available but can be produced if required." In addition, we provided to EPA all materials related to the Mission Insurance proceeding in 2013. We have no responsive information in our files.

Further, EPA Region II researched the Safety Light coverage situation thoroughly in connection with the former U.S. Radium site in Orange, NJ. CERCLA claims were made against all insurers in connection with what ultimately became a limited ability to pay settlement. Virginia Curry of Region II was involved in much of that document review, as was Jason Feingold of the DOJ. EPA should have comprehensive materials related to Safety Light's insurance coverage.

11. See answer to question #10 above

12. See answer to question #10 above.

13. See answer to question #10 above.

14. See answer to question #10 above.

15. See answer to question #10 above.

16. See answer to question #10 above.

17. See answer to question #10 above.

18. See answer to question #10 above.

19. See answer to question #10 above.

20. Safety Light did not have a stated document retention policy and, because of the storage space available to them, generally kept all records on Site. Isolite, Shield Source, Litebar Technology, Evenlite and Self-Powered Lighting each have a seven year retention policy for paper documents.

## ATTACHMENT 2

## ATTACHMENT 2

### Estimated Contribution to Soil Contamination Due to Tritium Releases from Returned Sign Disassembly Safety Light, Inc., Bloomsburg, Pa.

12/10/2007

#### Source Term Estimation:

Source term Estimation Period: 2000 to mid-2007	6.5 years
# Signs disassembled:	24248 signs
# tubes disassembled (12 /sign):	290976 tubes
# Curies/tube: 1 Ci aged 0.5 halflife	0.5 Ci H-3
# of broken tubes	136 tubes
average release rate based on broken tubes:	10 Ci H-3/yr
from stack sampling data 1999-2006:	9 Ci H-3/yr

#### Estimated Ground Deposition:

Plume Centerline deposition using atmospheric Stability Class D (from LLNL Hotspot code V2.05 in chart below):	
x -Distance from release point:	60 meters
Short-term deposition at x	90 $\mu\text{Ci}/\text{m}^2$ per Ci HTO released
Long term Average deposition integrated over 360 degrees:	
Effective plume width @ x	20 meters
Circumference @ x	376.8 meters
Long-term deposition @ x	5 $\mu\text{Ci}/\text{m}^2$ per Ci HTO released

#### Other assumptions:

% oxide in GTLS	2 % HTO
Effective migration depth in soil	2 meters
Soil density	1 g/cc

Resultant tritium concentration in soil at point of interest  
( $E27 \cdot (E30/100) / E31 / E32$ )

0.05 pCi/g per Ci released

Addition to tritium in soil each year of operation  
(10 Ci of broken tubes/yr), i.e., production rate ( $E35 \cdot E15$ )

0.5 pCi/g per year

Loss of tritium from soil due to decay, diffusion to  
deeper soil, and runoff (loss rate as effective halflife):

6 yr

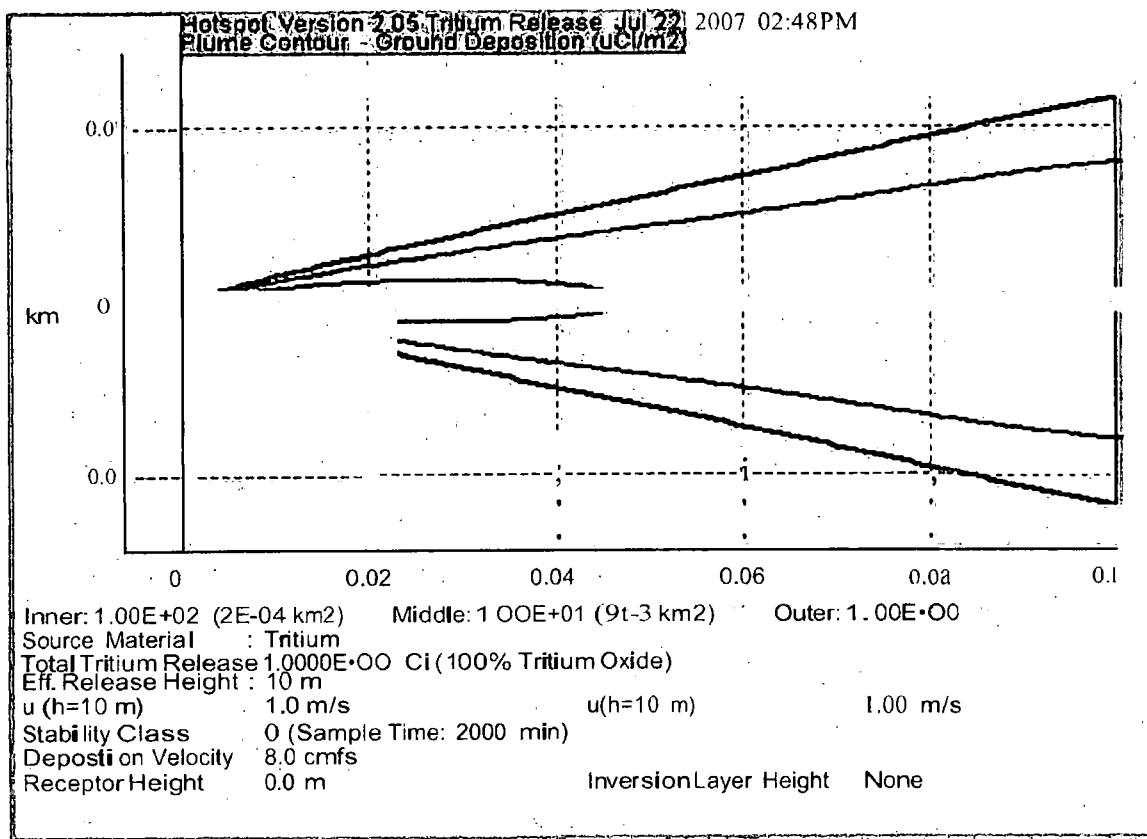
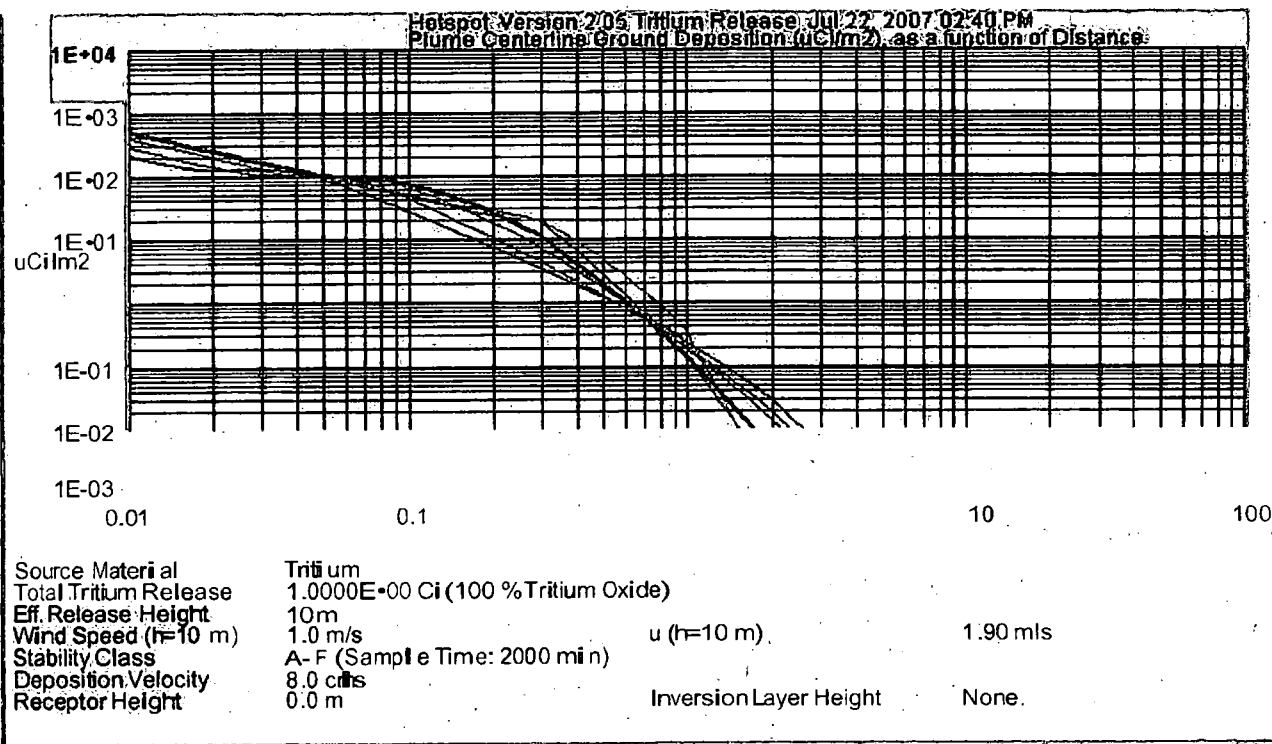
Total time of releases: 1998 to 2007

9 yr

Tritium concentration in soil in 2007 due to gaseous emissions:  
( $E37 \cdot E43 / (1 + 0.693 / E40 \cdot E43)$ )

2.2 pCi/g

# ATTACHMENT 2





May 6, 2014

Mr. Harry R. Steinmetz (3HS62)  
US Environmental Protection Agency  
1650 Arch Street  
Philadelphia, PA 19103

Reference: Request for Information dated February 25, 2014

Dear Mr. Steinmetz,

We enclose herewith Attachment 1 of our response to the EPA's Request for Information dated February 25, 2014. This attachment is being submitted as Confidential Business Information.

Please contact me with any questions.

Regards,

A handwritten signature in dark ink, appearing to read 'Bub' or 'Bub' with a stylized flourish.

William E. Lynch Jr.  
President

Encl.

Cc: Mr. Carl Everett, Saul Ewing



**Isolite Corporation**  
**Response to 25 FEB 2014 RFI**  
**Attachment 1**

**Confidential Business Information / Confidential Business Information / Confidential Business Information**

**Confidential Business Information / Confidential Business Information / Confidential Business Information**





































































































































































































































































































































































































































































































































































